

Patent Application
Docket No. 34645-00502USPT
Ericsson No. P13296-US2

In the Claims

Claims 1-16 have been cancelled without prejudice.

Claims 17-26 have been added as follows:

Claims 1-16 (Canceled).

17. (New) A method for sending an Internet Protocol (IP)-based data packet across a radio link, said method comprising the steps of:

compressing a packet header in the IP-based data packet, where said compressed packet header contains information related to changed values within an IP identification header field, a Real-Time-Transport Protocol (RTP) sequence number field and a RTP time stamp field when compared to values in a packet header associated with a previous IP-based data packet;

compressing said compressed packet header again such that said further compressed packet header does not contain any information at all related to the IP identification header field, the RTP sequence number field and the RTP time stamp field; and

transmitting said IP-based data packet that has said further compressed packet header across the radio link.

18. (New) The method of Claim 17, wherein said first step of compressing is done in accordance with a Robust Checksum-Based Header Compression (ROCCO) technique.

19. (New) The method of Claim 17, wherein said second step of compressing includes the following steps:

adjusting an IP identification of said IP identification header field to conform to a stream-sequential identification format if said IP identification conforms to a random format or a host-sequential format; and

synchronizing said IP data packet to a radio frame based on a time stamp within said RTP time stamp header field and a timing of said radio frame.

20. (New) The method of Claim 17, further comprising the steps of:
receiving said transmitted IP-based data packet; and
decompressing said received IP-based data packet to reconstruct the packet header by adding values in the IP identification header field, the RTP sequence number field and the RTP time stamp field.

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21. (New) The method of Claim 20, wherein said step of decompressing further includes:
assigning a sequence number to said RTP sequence number header field;
reconstructing an IP identification of said IP identification header field using said assigned sequence number; and
reconstructing a time stamp of said time stamp header field using a timing of said radio frame.

22. (New) A transmitter, comprising:
a first compressor for compressing a packet header in an Internet Protocol (IP)-based data packet, where said compressed packet header contains information related to changed values within an IP identification header field, a Real-Time-Transport Protocol (RTP) sequence number field and a RTP time stamp field when compared to values in a packet header associated with a previous IP-based data packet;
a second compressor for compressing said compressed packet header again such that said further compressed packet header does not contain any information at all related to the IP identification header field, the RTP sequence number field and the RTP time stamp field; and
a transmitter for transmitting said IP-based data packet that has said further compressed packet header across the radio link.

23. (New) The transmitter of Claim 22, wherein said first compressor uses a Robust Checksum-Based Header Compression (ROCCO) technique to compress the packet header in the IP-based data packet.

24. (New) The transmitter of Claim 22, wherein said second compressor includes:
an IP identification processor for adjusting an IP identification of said IP identification header field to conform to a stream-sequential identification format if said IP identification conforms to a random format or a host-sequential format; and
a radio frame synchronizer for synchronizing said IP-data packet to a radio frame based on a time stamp within said RTP time stamp header field and a timing of said radio frame.

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25. (New) A receiver, comprising:

a receiving unit for receiving an Internet Protocol (IP)-based data packet that has a compressed packet header which does not contain any information at all related to an IP identification header field, a Real-Time-Transport Protocol (RTP) sequence number field and a RTP time stamp field; and

a decompressing unit for reconstructing the compressed packet header by adding values in the IP identification header field, the RTP sequence number field and the RTP time stamp field.

26. (New) The receiver of Claim 25, wherein said decompressing unit further includes:

a local counter for assigning a sequence number within said RTP sequence number header field;

an IP identification processor for reconstructing an IP identification within said IP identification header field using said assigned sequence number; and

an RTP time stamp processor for reconstructing a time stamp within said time stamp header field using a timing of a radio frame in which the IP-based data packet was received.